



SFMTA



Muni Metro Capacity Study

Community Working Group Meeting #4

September 19, 2024

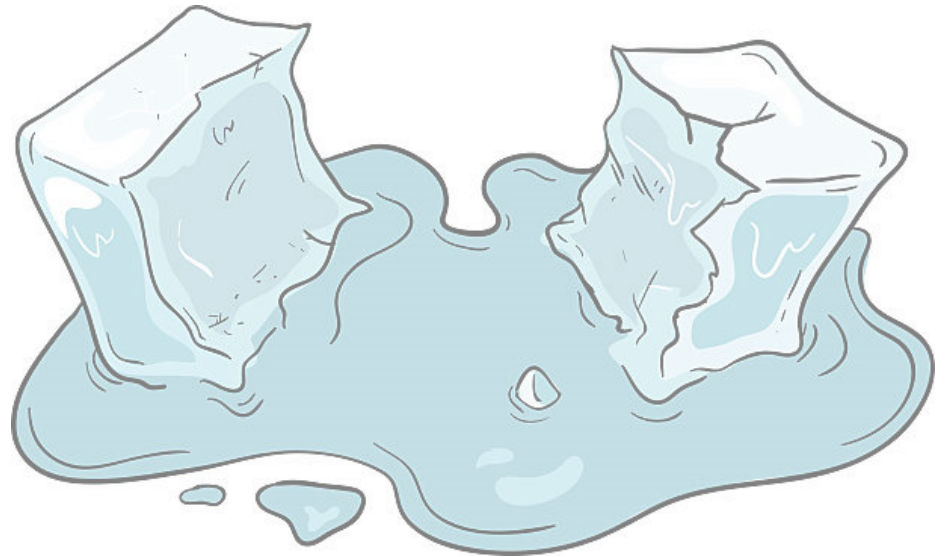
Agenda

1. Ice Breaker
2. Recap of Study
3. Study update
 - Capacity improvement packages
 - Next steps
4. Group discussion
5. Next Steps

Ice Breaker

Describe Muni Metro in **ONE WORD**.

Raise your hand if you are excited that the L Taraval train is returning on Saturday, September 28th!



Role of Muni Metro Capacity Study

Develop a future vision for the rail system, answering the following questions:

1. How much more capacity is needed? When? Where?
2. How much more capacity can different strategies achieve?
3. What other strategies should be added to our plans to accommodate future needs?
4. What is the most strategic way to fund these improvements?

Meeting Roadmap

Meeting #1 (November 2, 2023): Introduction

Meeting #2 (November 16, 2023): Project need and potential solutions to be studied

Meeting #3 (May 9, 2024): Structured group discussion about benefits and tradeoffs of potential solutions

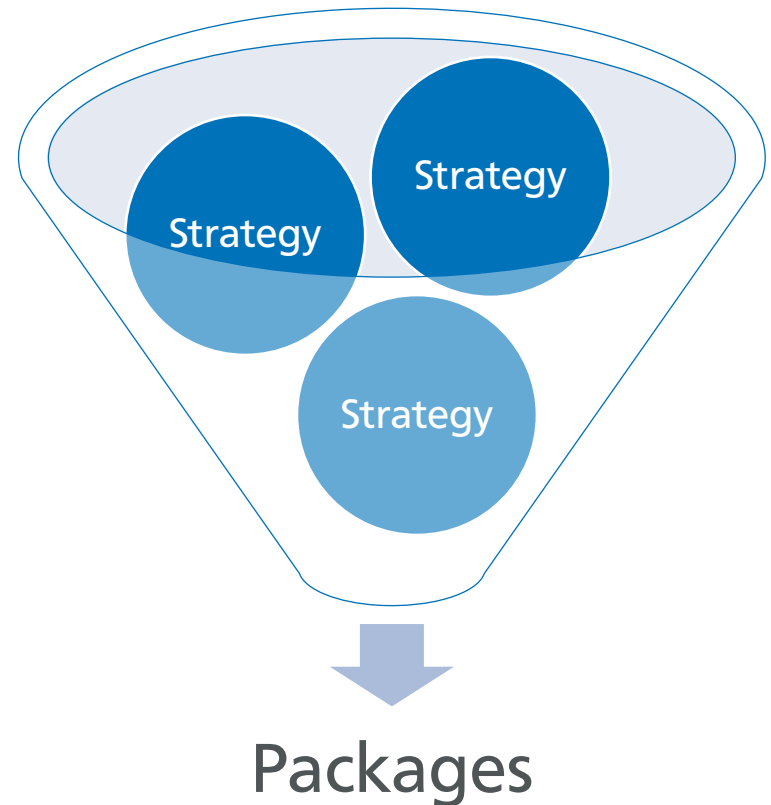
Meeting #4 (September 19, 2024): Range of potential packages of improvements and group discussion

Potential subsequent meeting topics

- Package evaluation results and draft recommendations
- Funding and implementation timeline, phasing of improvements
- Limited discussion of specific improvements on key surface lines

Packages overview

- Now that we have a good understanding of capacity strategies, we're assembling them into packages of improvements
- All packages must meet capacity needs
- Intended to cover a range of different levels of intervention to understand tradeoffs



Package components

1. Which capacity strategies are included?

- 3-car N-Judah
- 3-car M to SF State
- Surface-only subfleet
- Systemwide low-floor
- Transit priority: paint
- Transit priority: barrier
- Transit signal priority
- Transit signal pre-emption
- Route restructuring

2. Which lines are in the Market Street subway?

- J-Church
- K-Ingleside
- L-Taraval
- M-Ocean View
- N-Judah

3. Station platform heights for each line

- High-platform at all stops
- High platform in subway, mini-highs on surface
- Line is low-platform at all stops
- Mixed (legacy) platform heights

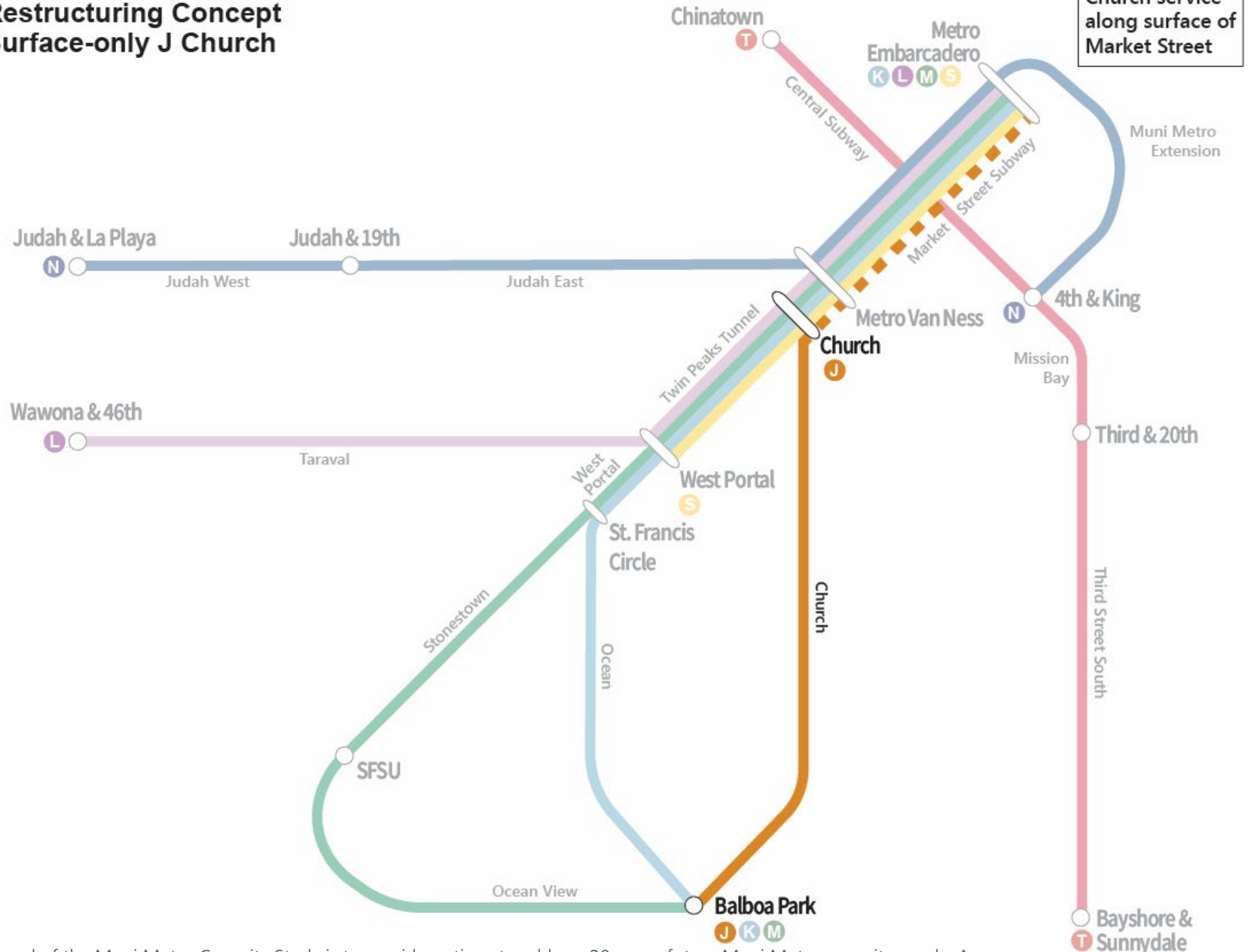
Route restructuring: three concepts considered in packages

Reminder: Muni Metro Capacity Study is focused on what we might need to accommodate future demand in long-term. Forecasts shared at CWG Meeting #2 showed that longer trains alone will not provide enough capacity and at least one line would need to be removed from the subway at some point in the future.

- Surface-only J Church line (potentially continuing down Market Street)
- Surface-only combined K Ingleside/L Taraval line
- J Church/M Ocean View line swap
 - J Church line extends from Balboa Park to Stonestown
 - M Ocean View line terminates at SF State

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Restructuring Concept Surface-only J Church

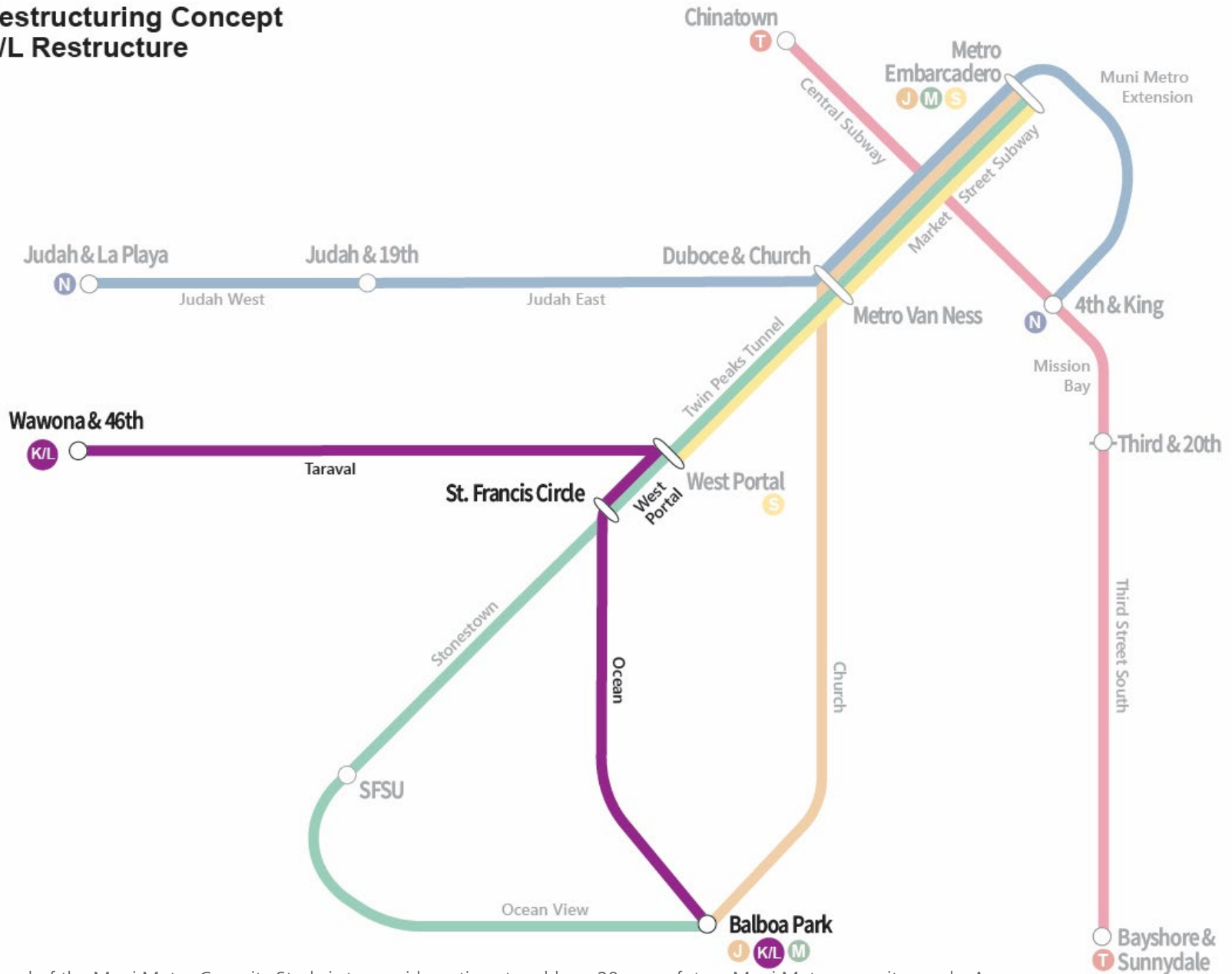


The goal of the Muni Metro Capacity Study is to provide options to address 20+ year future Muni Metro capacity needs. Any specific projects will be developed separately with additional extensive outreach and analysis.



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Restructuring Concept K/L Restructure



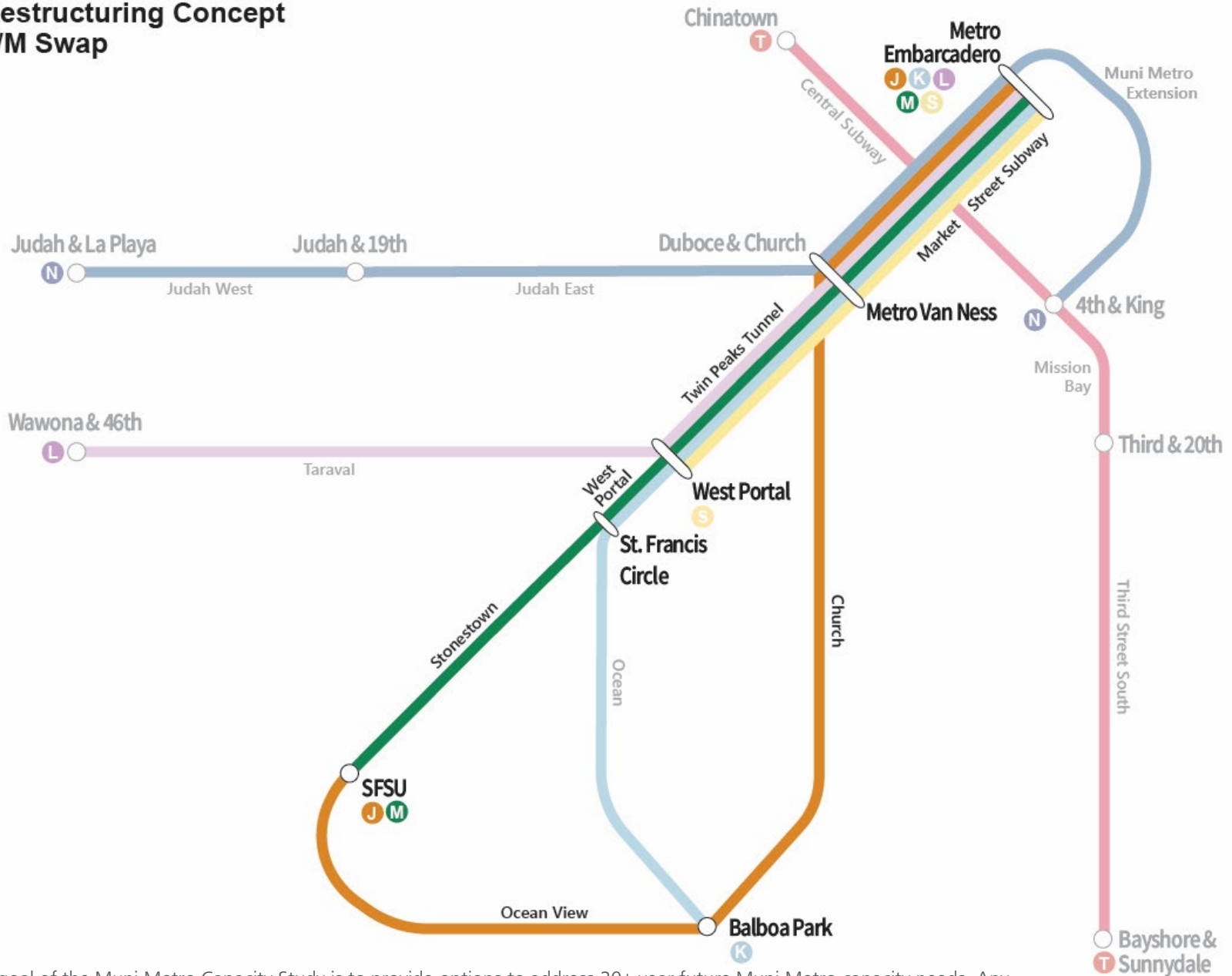
The goal of the Muni Metro Capacity Study is to provide options to address 20+ year future Muni Metro capacity needs. Any specific projects will be developed separately with additional extensive outreach and analysis.



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Restructuring Concept

J/M Swap



The goal of the Muni Metro Capacity Study is to provide options to address 20+ year future Muni Metro capacity needs. Any specific projects will be developed separately with additional extensive outreach and analysis.

Muni Metro surface segments currently have a mix of inaccessible stops and accessible “mini-high” ramp stops

Example of inaccessible stop



Example of “mini-high” ramp stop



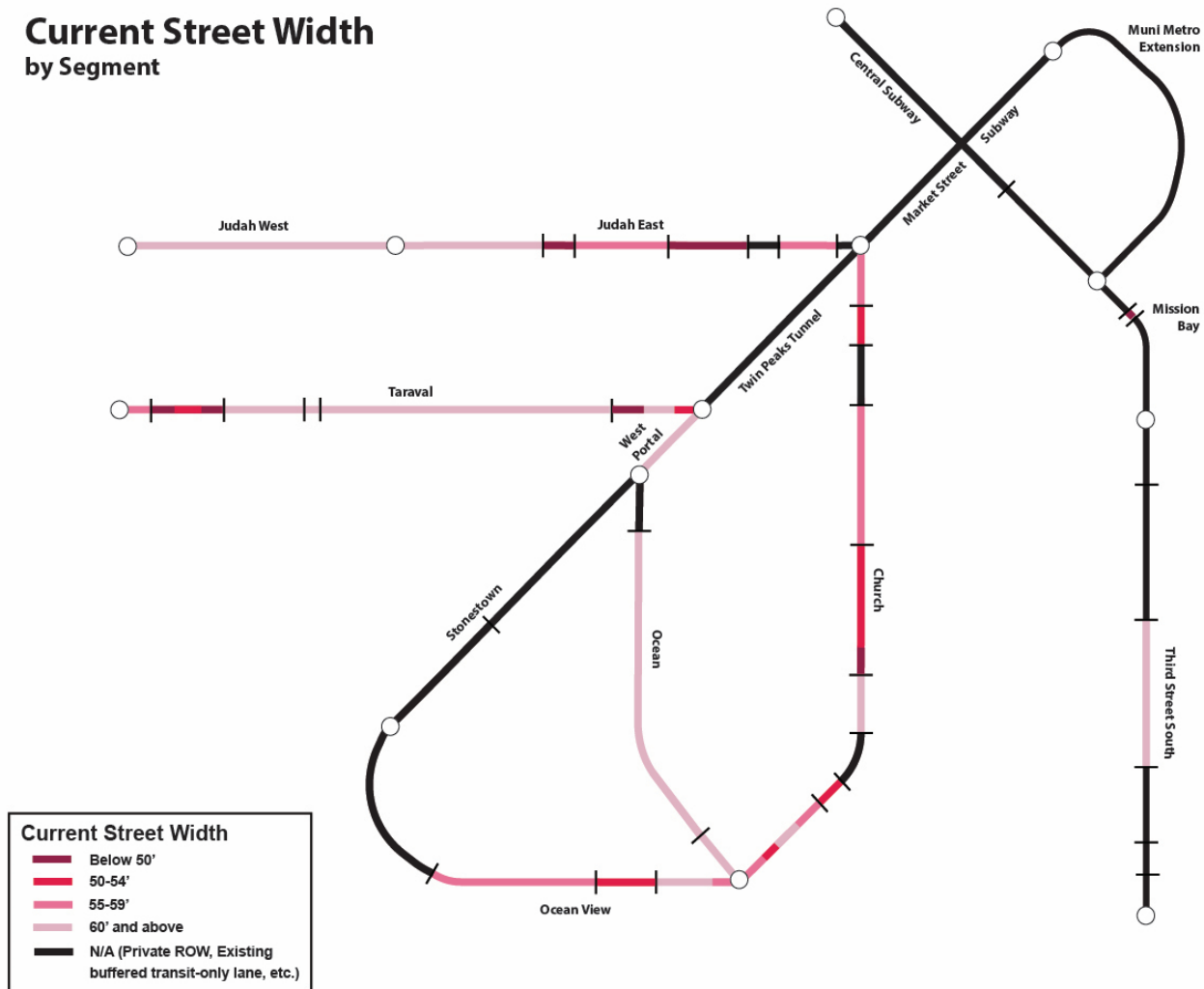
“Full modernization” packages assumes 100% of system is level boarding

Example of center high platform level boarding

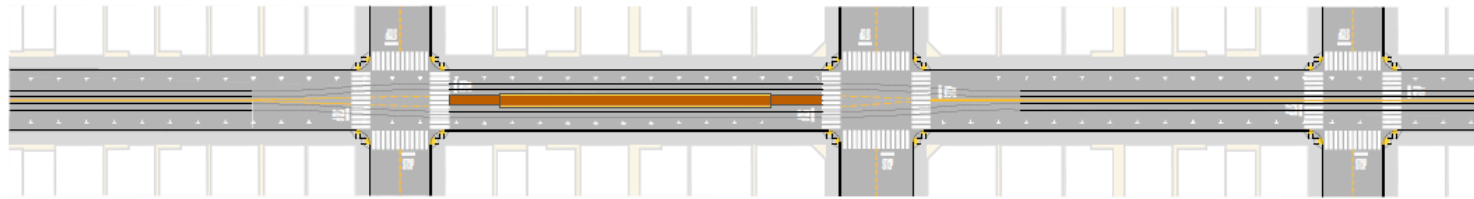


Existing street widths where Muni Metro operates

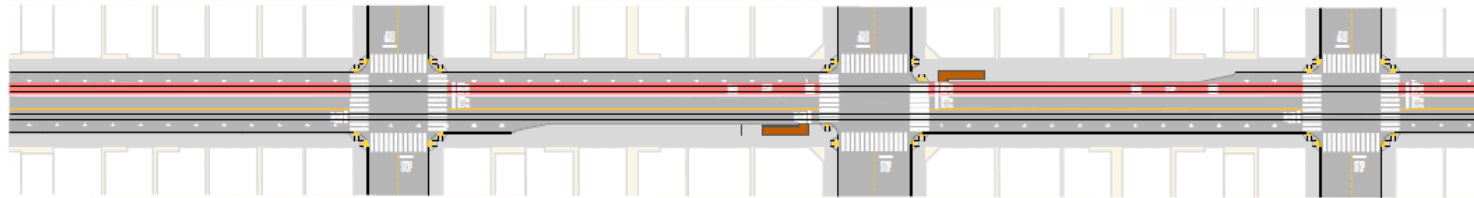
Current Street Width by Segment



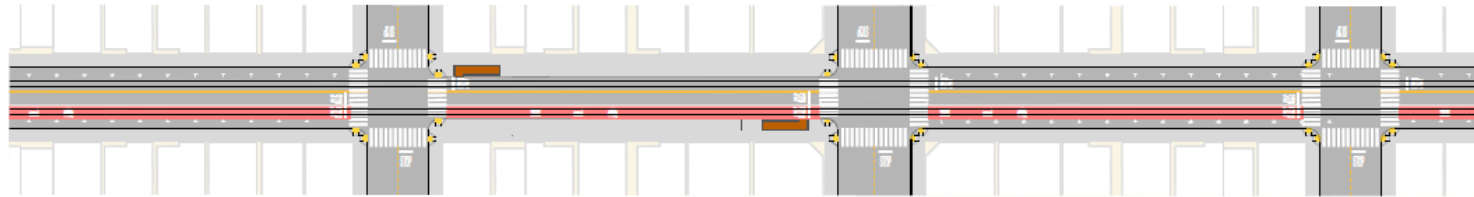
Street design options that could accommodate accessible boarding within a 50-55' wide street, ordered from smallest to largest change in travel lane and parking/loading



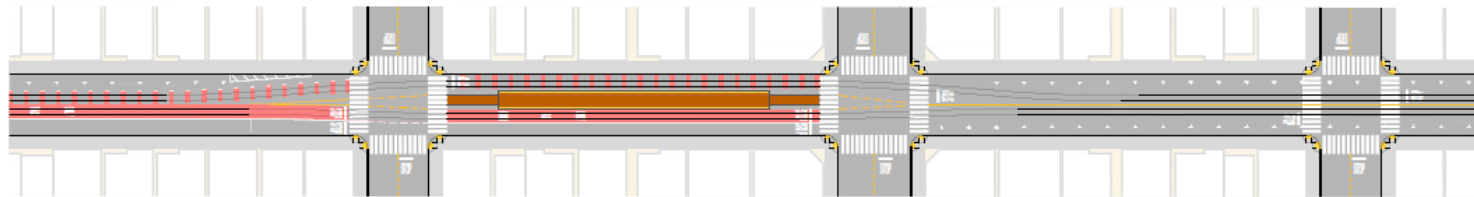
1: Center platform, maintain travel lane and parking/loading on both sides of street



2: Side platforms with small accessible ramps, maintain travel lane on both sides and parking/loading on only one side of the street









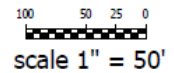
3: Side platforms with small accessible ramps, maintain travel lanes on both sides of street, no parking/loading on either side of street



4: Center platform and transit lanes in both directions, maintain travel lane on only one side of street, no parking/loading on either side of street

LEGEND

-  TRANSIT ONLY LANE
-  TRANSIT + LOCAL ACCESS LANE
-  SHARED USE LANE
-  GENERAL TRAVEL LANE, NO LRV
-  SIDEWALK LEVEL PLATFORM WITH MINI-HIGH RAMP
-  HIGH LEVEL CENTER PLATFORM



scale 1" = 50'

Eight packages, grouped into four categories

Full Modernization – “All in” for transit performance including level boarding

- A. All lines low floor (except T)
- B. M, N, T high-floor; J, K, L low-floor
- C. K, L, M, N, T high-floor; J low-floor

Mid-Range Combination – “All in” for transit performance, except level boarding

- D. Mid-range combination

Minimalist Approaches – What if cost/delivery/community feedback limit what is feasible?

- E. Lower cost
- F. Lower delivery risk
- G. Limited passenger + neighborhood disruption

Retained J Church – What would it take to provide enough capacity and keep the J-Church in the subway?

- H. Retained J-Church

Full modernization

	What is it?	Why test it?
Full Modernization	“All in” for transit performance including level boarding	What is the largest possible capacity benefit we can provide?
<i>A. All low floor</i>	Build low floor platforms on surface (except T), convert subway and existing high platform stops to low floor	Easier to implement on surface but require subway reconstruction
<i>B. MNT High</i>	Build low floor platforms for JKL and high floor platforms for M, N where not already in place	Easier to implement in subway but more challenging on surface
<i>C. KLMNT High</i>	Build low floor platforms for J and high floor platforms where not already in place for other lines	Easier to implement in subway but even more challenging on surface

Mid-range combination

	What is it?	Why test it?
D. Mid-Range Combination	“All in” for transit performance, except level boarding	Understand incremental costs/benefits of level boarding

Minimalist

	What is it?	Why test it?
Minimalist	What if cost/delivery/ community feedback limit what is feasible	What are the benefits/costs of lower levels of upgrades?
<i>E. Lower Cost</i>	Relatively less expensive components, including not upgrading every stop with a small ramp	
<i>F. Lower Delivery Risk</i>	Relatively less engineering risk/uncertainty	
<i>G. Limited Passenger/ Neighborhood Disruption</i>	Relatively lower anticipated impacts to current routing, traffic, and streetscapes	

Retained J-Church

	What is it?	Why test it?
H. Retained J-Church	What would it take to provide enough system capacity and keep the J-Church in the subway?	Understand what it would take to keep J in subway and the impact on the rest of Muni Metro system operations

Package details

Package / Theme		Capacity Strategies Included										In Market Subway?						Floor/Platform Height							
		1. 3-car N-Judah	2a. 3-car M-Ocean View	3. Surface-Only Subfleet	4. Systemwide Low-Floor	5a. Transit priority: paint	5b. Transit priority: barrier	6a. Transit Signal Priority	6b. Transit Signal Pre-	8a. Restructuring: Surface J	8b. Restructuring: K/L	8c. Restructuring: J/M swap	J-Church	K-Ingleside	L-Taraval	M-Ocean View	N-Judah	T-Third	J-Church	K-Ingleside	L-Taraval	M-Ocean View	N-Judah	T-Third	
A	Full Modernization: All Low Floor	x	x		x		x	x	x	x		x	N	Y	Y	Y	Y	-	L	L	L	L	L	L	H
B	Full Modernization: MNT high	x	x	x			x	x	x	x	x	x	N	N	N	Y	Y	-	L	L	L	H	H	H	H
C	Full Modernization: KLMNT high	x	x	x			x	x	x	x		x	N	Y	Y	Y	Y	-	L	H	H	H	H	H	H
D	Mid-Range Combination	x	x	x		x	x	x	x	x		x	N	Y	Y	Y	Y	-	L	H*	H*	H*	H*	H*	H
E	Minimalist Approach: Lower Cost	x				x		x		x	x		N	N	N	Y	Y	-	M	M	M	M	M	M	H
F	Minimalist Approach: Lower Delivery Risk	x	x	x				x		x	x		N	N	N	Y	Y	-	L	L	L	H*	H*	H*	H
G	Minimalist Approach: Limited Passenger & Neighborhood Dis	x	x			x		x		x		x	N	Y	Y	Y	Y	-	H*	H*	H*	H*	H*	H*	H
H	Retained J Church	x	x	x		x		x	x		x	x	Y	N	N	Y	Y	-	H*	L	L	H*	H*	H*	H

H	Line is high-platform at all stops
H*	High platforms in subway; mini-highs on surface
L	Line is low-platform at all stops
M	Mixed (legacy) platform heights along line

These packages are now undergoing evaluation to understand their performance in the following areas

Key funding objectives

- **Capacity:** Expand capacity enough to meet demand where needed
- **State of Good Repair:** Effectively repair or replace aging infrastructure

Additional important goals

- **Cost effectiveness** (are there other ways to achieve the same results for less money?)
- **Improve transit speed and reliability** (necessary for capacity increases to be effective)
- **Trade-offs** How many tradeoffs (e.g. construction disruption or other impacts on surrounding neighborhoods, how well solutions respond to community member and rider concerns)
- **Accessibility:** Improve Muni Metro system accessibility
- **Equity:** Improve Muni Metro equity

Note: Evaluation framework previously presented at November 16, 2023 meeting

Q+A and discussion

- **First:** questions about the content presented?
- **Then:** five discussion questions on the following topics.
 1. Limited street width prioritization/tradeoffs
 2. Level boarding
 3. Route restructuring
 4. Package preferences
 5. Next steps

Framing for the discussion questions

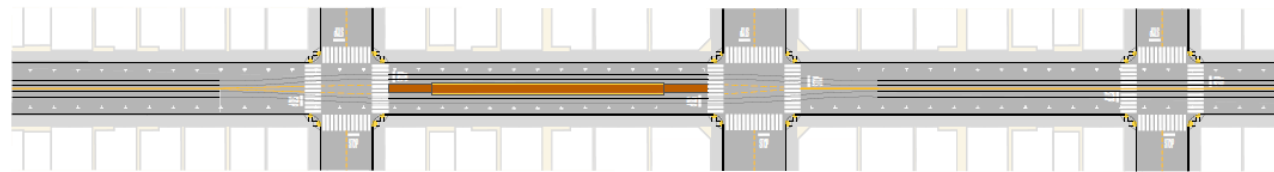
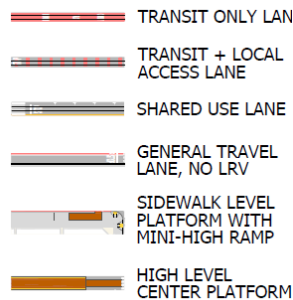
We would like to center as many possible perspectives when answering the questions. In your answers, please state which perspectives you are bringing and try to think about other possible perspectives as well. Our goal is for CWG members bringing different perspectives to talk directly to one another.

Category	Possible Perspectives
Rider of specific line	J-rider, K-rider, L-rider, M-rider, N-rider, T-rider, etc.
Primary mode(s)	Transit, driving, cycling, walker, scooter, Uber/Lyft etc.
Neighborhood	Outer Sunset, Bayview, Cole Valley, West Portal, Ocean View, SoMa, etc
Occupation/roles	Small business owner, parent of young children, college student
Priority issues	Housing affordability, climate change, economy, urbanism
Demographics	Senior, youth, male, female, non-binary
Other?	

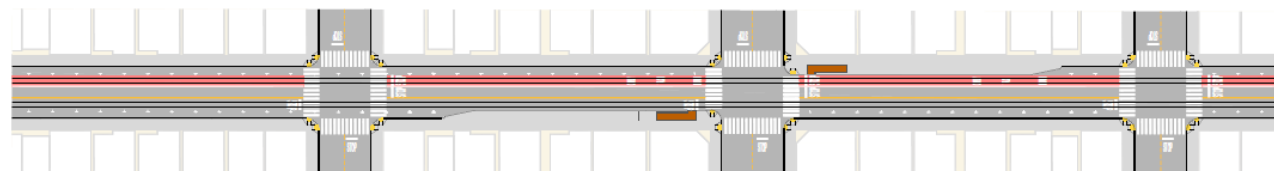
Question 1: limited street width/ prioritization

Street space on Muni Metro corridors is limited. We may not be able to accommodate every desired street use

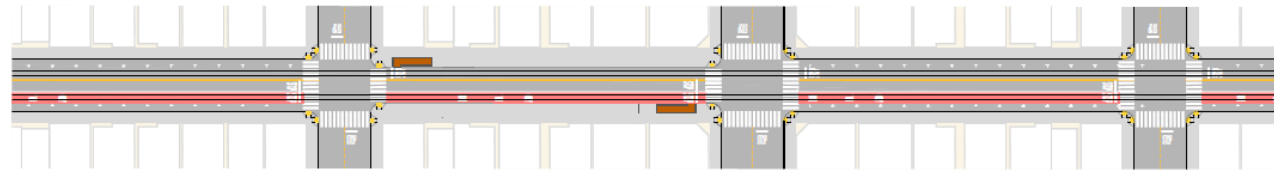
- Which of the representative street configurations for a fifty-foot street width would be most palatable?
- Are there nuances to where you would swap the priorities? (e.g. commercial vs. residential area)?



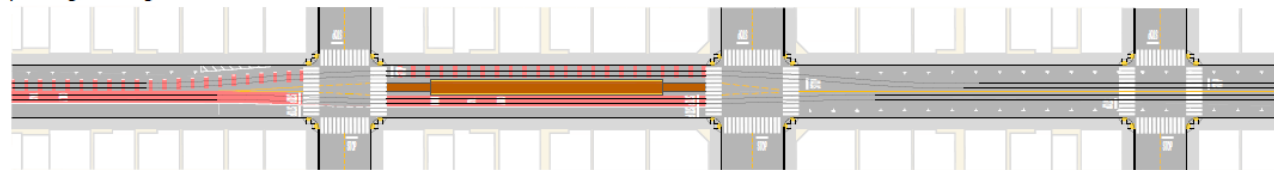
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Question 2: level boarding

Level boarding on all Muni Metro rail lines (as envisioned in the “Full Modernization” packages) provides significant accessibility improvements and also improves speed and reliability, but it comes with significant trade-offs as illustrated in the example configurations. Instead, adding mini-high accessible ramps would take up less street space.

- Do you think we should pursue full level boarding or a mix of level boarding and “mini-highs”?

Inaccessible Stop



Accessible via Small Ramp



Full Level Boarding

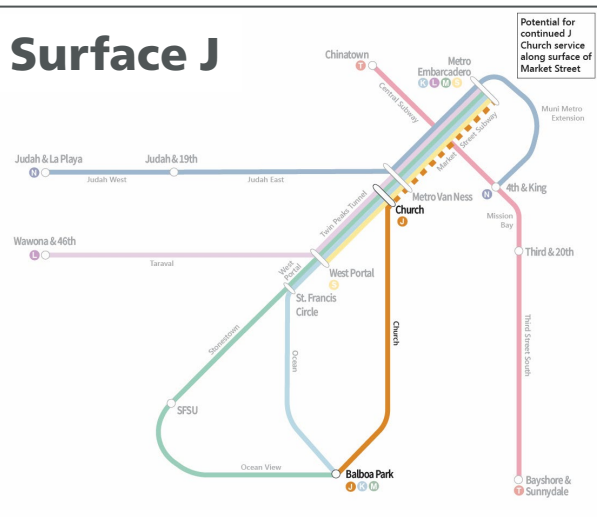


Question 3: route restructuring

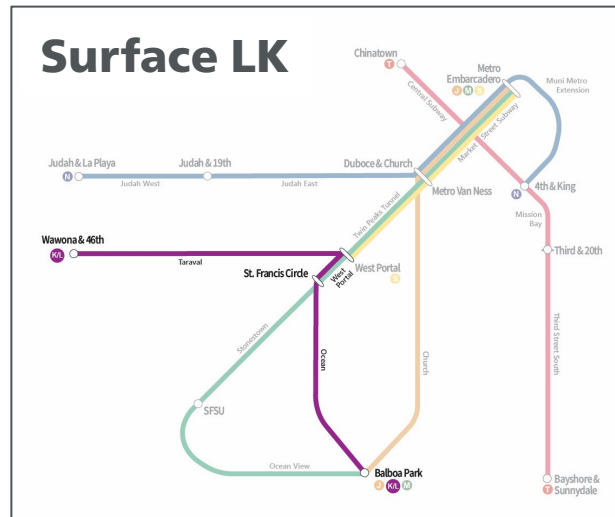
Muni Metro is the 3rd busiest light rail in the U.S. and the only one that still merges five lines into one subway tunnel. If current forecasts are realized, we will need to begin planning for removing one line from the subway at some point in the future.

- Does this Study finding resonate with you? If not, what else is needed to better make the case?
- Please deliberate on the benefits and tradeoffs you see with each restructuring concept.
- What can we do to mitigate the tradeoffs for those negatively impacted by each idea?

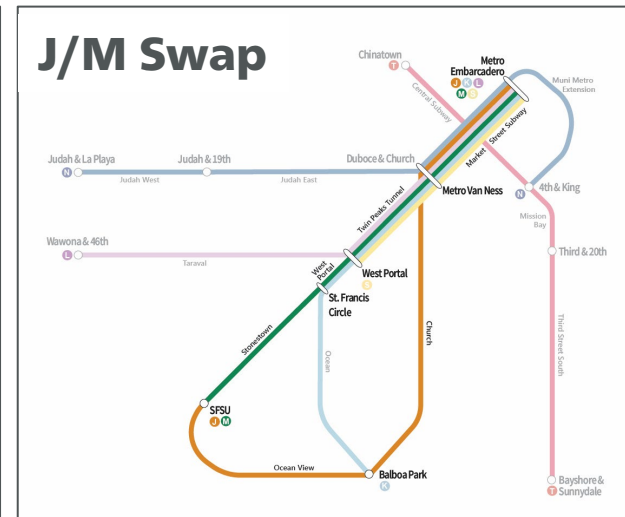
Surface J



Surface LK



J/M Swap



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Question 4: package preferences

Based on today's information and discussion, how would you prioritize the different packages?

Full Modernization – “All in” for transit performance including level boarding

- A. All lines low floor (except T)
- B. M, N, T high-floor; J, K, L low-floor
- C. K, L, M, N, T high-floor; J low-floor

Mid-Range Combination – “All in” for transit performance, except level boarding

- D. Mid-range combination

Minimalist Approaches – What if cost/delivery/community feedback limit what is feasible?

- E. Lower cost
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Retained J Church – What would it take to provide enough capacity and keep the J-Church in the subway?

- H. Retained J-Church

Question 5: next steps

We have two options for when we meet again. The content we are sharing is significant and it may be helpful to continue the discussion of the above topics again before we meet in January to review the evaluation results.

- Would you like to have another meeting before the planned January meeting to continue this discussion?
- Do you have any feedback on the best way to continue this conversation as we prepare to share out the evaluation results?

Thank you!